

advanced FLOW engineering Instruction Manual P/N: 42-12021

Make: **Dodge** Model: **Diesel Trucks** Year: **2003-204.5** Engine: **L6-5.9L (td)**



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A	1	Fuel Manifold Assembly	05-60565
B	1	Filter, Fuel	44-FF019
C	1	Bowl, Water Separator	05-60487
D	1	Bracket, Frame; Carbon Steel	05-60504
E	1	Spacer, Bracket	05-60577
F	2	Washer, 5/8"	03-50458
G	1	Nut, Hex: 5/8"-11	03-50450
H	4	Screw, Socket Head Cap M6x1.0x50mm	03-50443
I	4	Washer, M6 (Fiber)	03-50457
J	4	Washer, M6	03-50444
K	4	Nut, Flanged Nyloc: M6	03-50445
L	2	Fitting: 3/8" NPT to AN (Installed)	05-60509
M	1	Harness Relay	05-60551
N	1	Connector, Add a harness	05-60583
O	1	Hose, Fuel Return	05-60570 (31)/ 05-60629 (33)
P	1	Screw, Cap: 5/8"-11x8"	03-50449
Q	12	Ties, Nylon Cable, 12"	05-60167
R	1	Adaptor + O-Ring	05-60622
S	1	Harness, Power	05-60523
T	1	Hose, Fuel Inlet	05-60568 (31)/ 05-60628 (33)
U	1	Hose, Fuel Outlet	05-60569 (31)/ 05-60631 (33)

Note: Legal in California for use on race vehicles only. The use of this device on vehicles used on public streets or highways is strictly prohibited in California and others states that have adopted California emission regulations.





Figure 1

Step 1: Connect the bracket to the manifold using the four (4) supplied M6x1.0 x 50mm bolts, M6 washers and M6 flange nuts.

NOTE: The bed will need to be removed or the fuel tank needs to be removed prior to step number 2.



Figure 2

Step 2: Remove the rear differential vent hose from the shock tower.



Figure 3

Step 3: Remove the factory wire harness from the two mounting holes. (As circled above)



Figure 4

Step 4: Install the bracket onto the frame.



Step 5: Install the supplied 5/8" -11 x 8" bolt, and 5/8" washer through the bottom of the bracket into the factory hole in the frame.



Figure 6

Step 6: Install the other supplied 5/8" washer and 5/8" nut onto the bolt and tighten using a 15/16" wrench and socket.



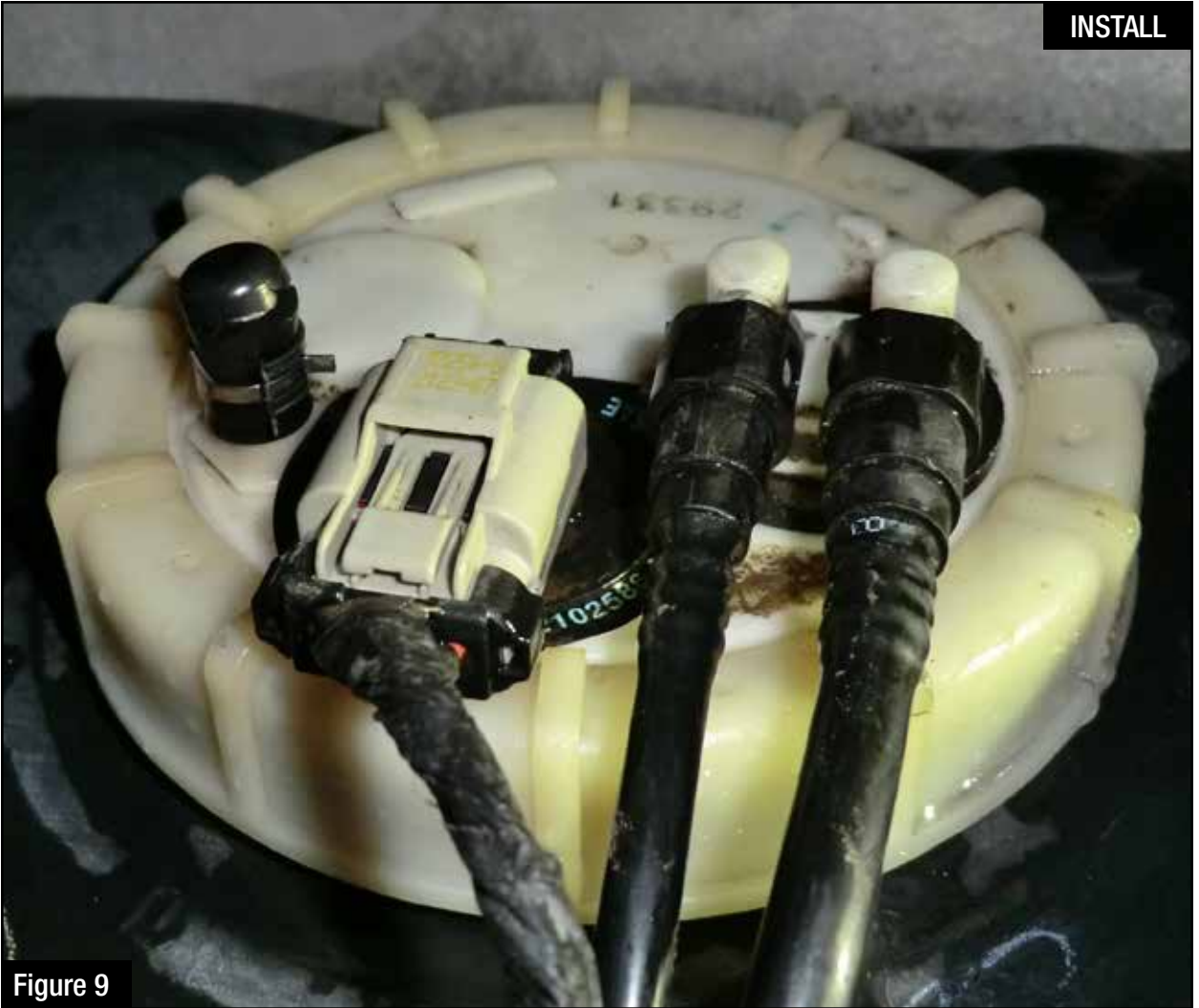
Figure 7

Step 7: The mounting tab located on the stock wire harness, needs to be cut off.
(Location shown above)



Figure 8

Step 8: Reattach the differential vent tube back onto the shock tower. Reinsert the stock wire harness back into the stock mounting location.

**Figure 9**

Step 9: Clean area around stock fuel fuel pump sender assembly to prevent dirt from falling into the tank.

Step 10: Unclip and remove the stock feed and return fuel lines, from the fuel pump sender assembly.

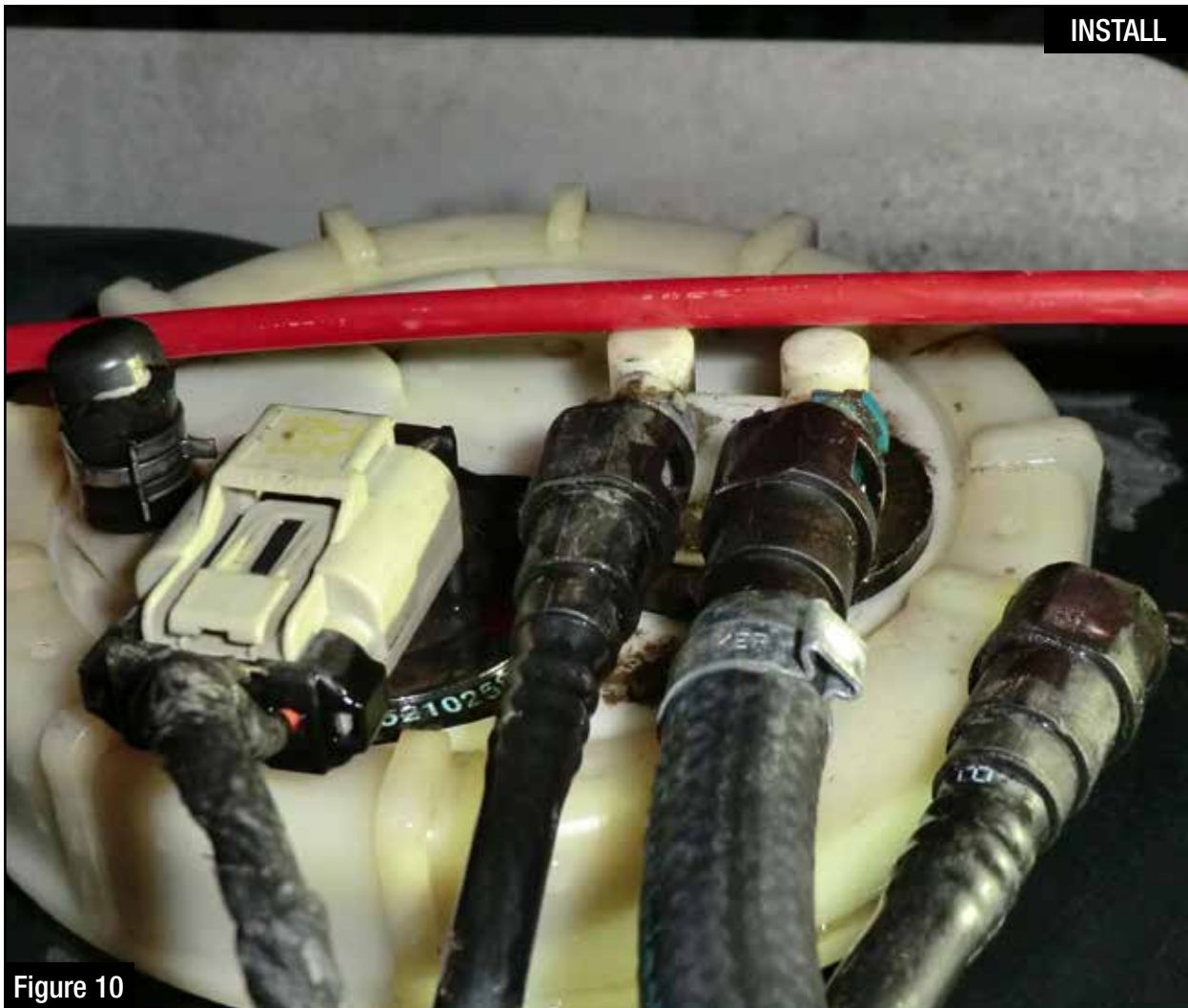


Figure 10

Step 11: Install the supplied fuel line (with silver “AN” fitting) onto the larger (outlet) side of the fuel pump sender assembly.



Figure 11

Step 12: Install the 3/8" quick disconnect on the supplied outlet fuel line (with black "AN" fitting) into the quick disconnect fitting on the stock fuel feed line.

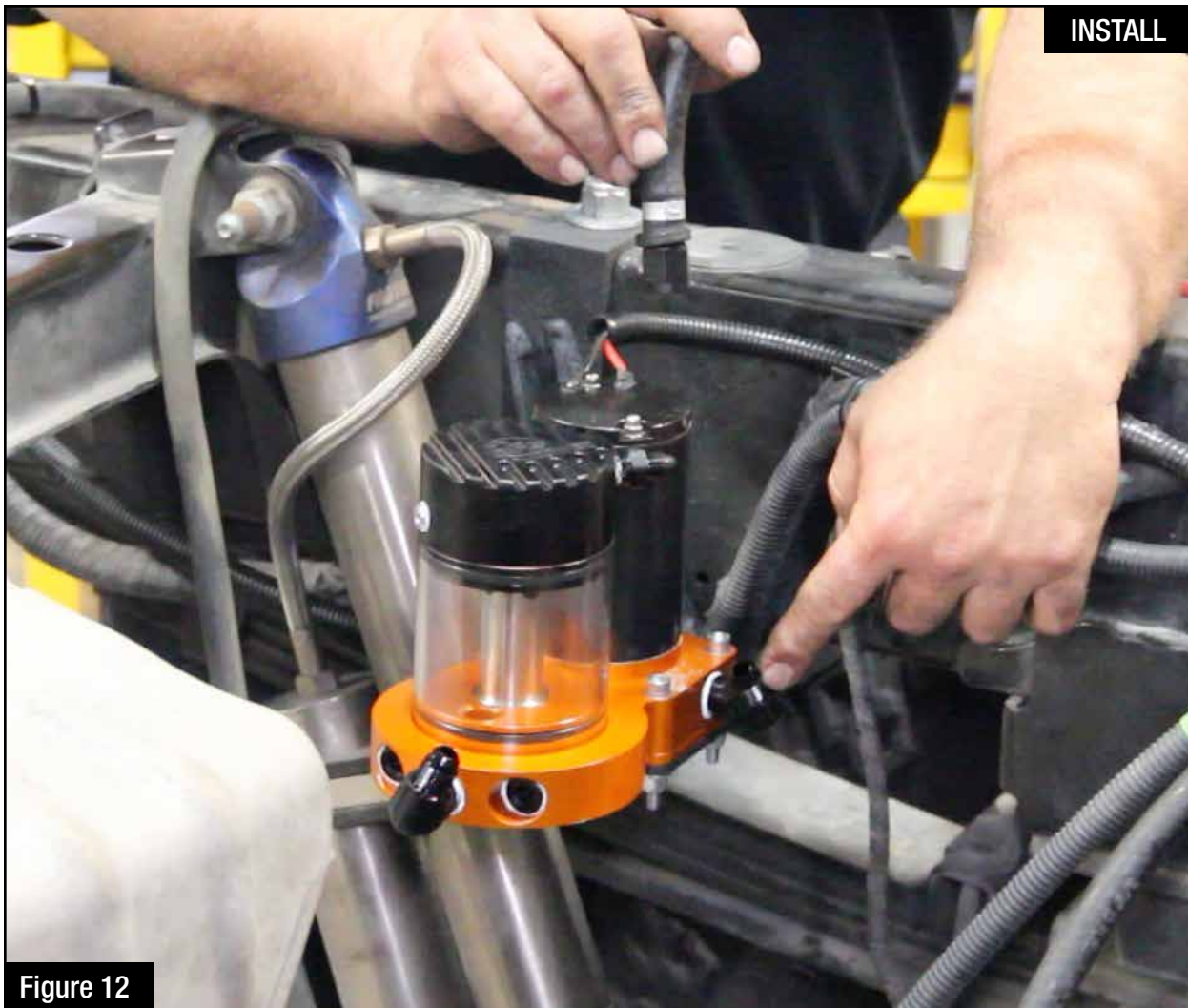


Figure 12

Step 13: Install the supplied inlet fuel line (silver “AN” fitting) onto the fuel inlet port of the DFS780.



Figure 13

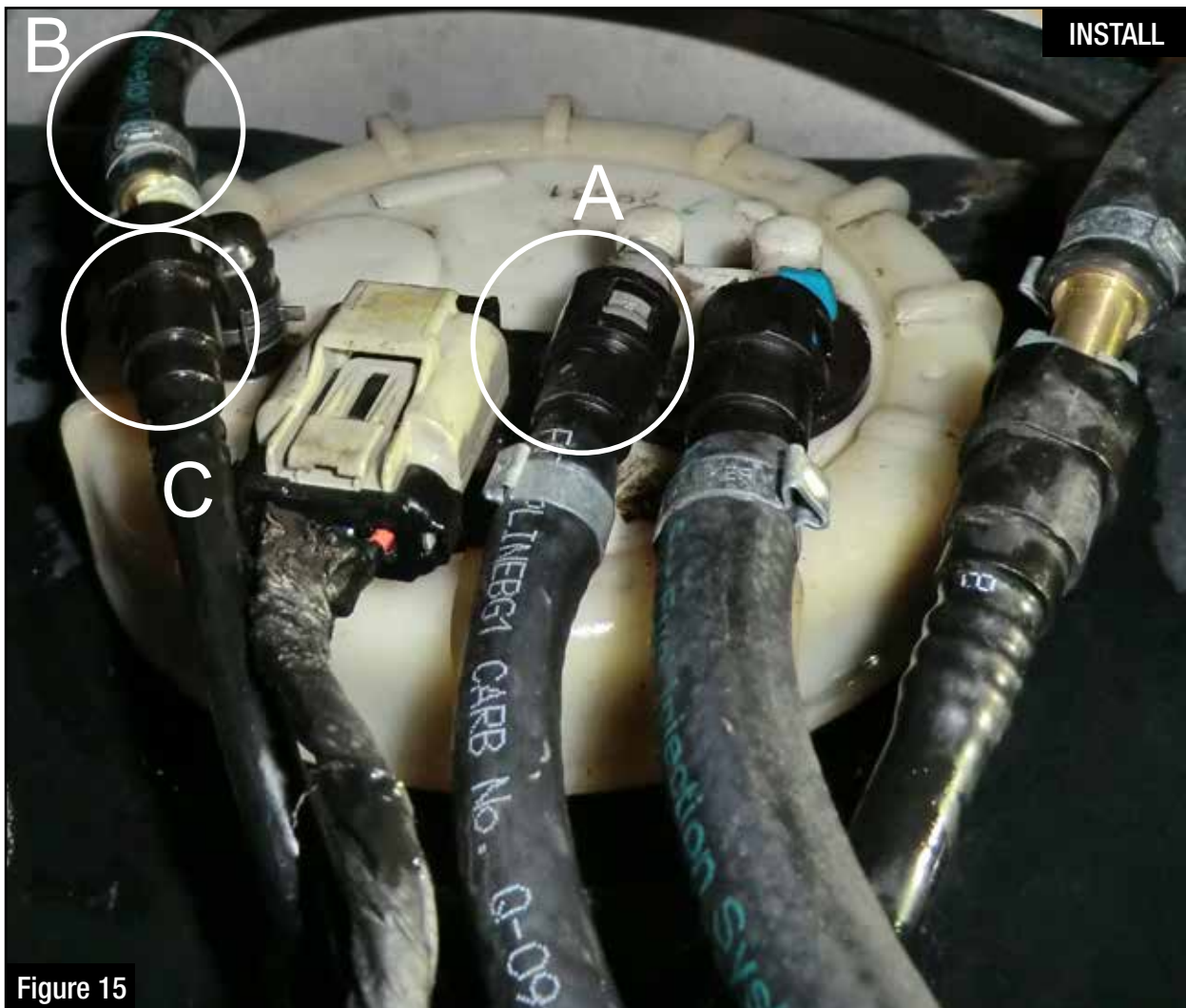
Step 14: Install the supplied outlet fuel line (black “AN” fitting) onto the fuel **outlet** port of the DFS780.



Figure 14

Step 15: Turn sight glass to the desired angle and using a 1-1/4" wrench, tighten the center nut under the DFS780 manifold.

Step 16: Install the supplied return line (-4 AN fitting) onto the top of the DFS780.

**Figure 15**

Step 17: Route the return line along the frame following the new fuel lines.

Step 18: Install the new return line onto the smaller (inlet) side of the fuel pump sender assembly.
(as shown in circle A)

Step 19: Install the 5/16" fitting (as shown in circle B) onto the quick disconnect fitting on the stock return line (as shown in circle C)

**Figure 16**

Step 20: Attach supplied water separator bowl onto the supplied fuel filter. Using a light oil, lube the gasket on the fuel filter before installation.



Figure 17

Step 21: Screw the fuel filter assembly onto the manifold and tighten.



Figure 18

Step 22: Route the supplied wiring harness along the frame.

Step 23: Plug the Deutsch connector into the mating connector on the DFS780.



Figure 19

Step 24: Organize the wire harness and fuel lines and secure with the supplied zip ties.



Figure 20

Step 25: Disconnect the stock fuel pump feed hose located on the inside of drivers side frame rail under the driver's door.

**Figure 21**

Step 26: Disconnect the electrical connector (A) from the stock fuel pump.

Step 27: Remove the stock fuel pump from the stock fuel filter housing by removing 4 bolts as shown.

Retain the bolts removed in this step.

NOTE: Remove the stock inner fender liner to make the removal of the stock fuel pump easier.



Figure 22

Step 28: Install the aFe Fuel Pump Adapter onto the stock fuel filter housing using 2 of the bolts removed in Step 27.

NOTE: If the inner fender liner was removed, please reinstall.



Figure 23

Step 29: Attach the new aFe fuel hose to the factory fuel line.



Figure 24

Step 30: Run the remaining wire harness along the frame to the engine compartment. Secure using supplied zip ties.



Figure 25

Step 31: Connect the black wire ring terminal to the negative side on the battery.



Step 32: Connect the red wire ring terminal to the positive side of the battery.

NOTE: Check the fuse to make sure it is already installed in the connector.

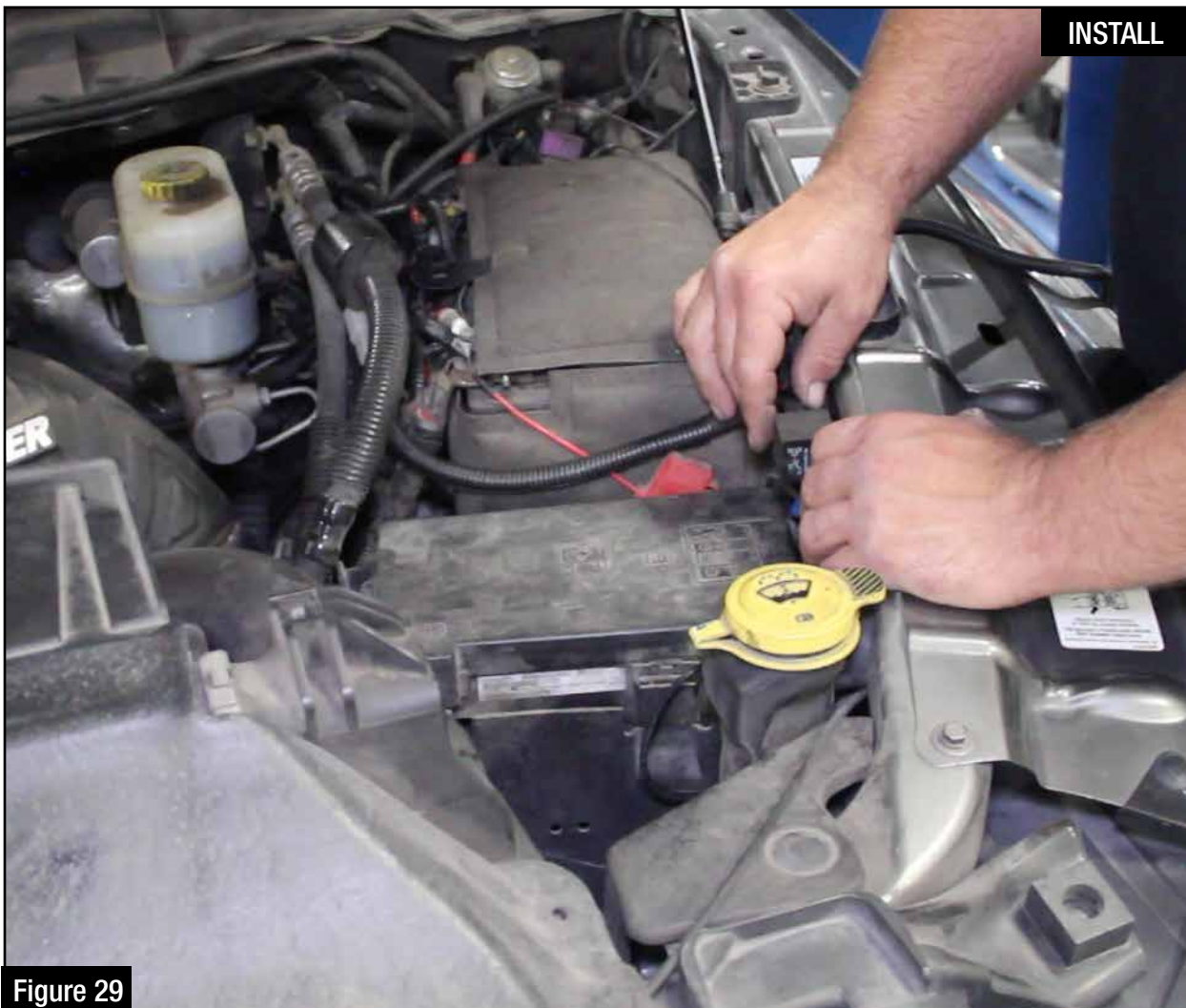


Figure 27

Step 33: Organize any of the loose wire harness and secure with the remaining zip ties.

**Figure 28**

- Step 34: Find a 12 volt ignition source inside the fuse box that only comes on with the key in the “run” position. Once a 12 volt source is located, pull fuse from the fuse box.
- Step 35: Using the supplied create a circuit, install the removed fuse from step 33 and insert it into the open location on the create a circuit B (not in line with the wire).
- Step 36: Install the supplied fuse into the open location on the create a circuit A (in line with the wire), and install into the 12 volt ignition source inside the fuse box.

**Figure 29**

Step 37: Plug the supplied relay harness into the Deutsch connector on the power harness.

Step 38: Secure the relay.

Step 39: Attached power wire to the create a circuit.

**Figure 30**

Step 40: Turn the key to the “Run” position and watch to see if the DFS780 fills with fuel. If the DFS780 does not fill with fuel, use the supplied tank valve (on the top of the DFS780) to release trapped air which will allow DFS780 to fill. If DFS780 still does not fill, try starting the engine.

Step 41: Installation is now complete. Make sure that all fittings are tight and that fuel is not leaking from any of the connections made while installing.

Turbocharger



P/N: 46-60050

Intercooler Tubes



P/N: 46-20014

Exhaust Manifold



P/N: 46-40012

Intake System "Momentum"



P/N: 50-72002

Intake Manifold



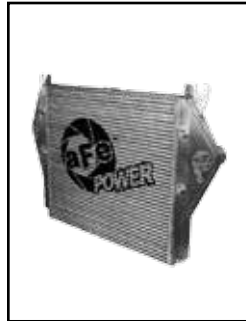
P/N: 46-11011

Torque Converter



P/N: 43-12021

Intercooler



P/N: 46-20011

Exhaust System



P/N: 49-02007NM

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video; please go to aFepower.com.

DFS FUEL SYSTEM

“WORRY FREE” WARRANTY POLICY

Please read this warranty policy before proceeding with the installation of this advanced FLOW engineering, Inc. (aFe) product.

aFe's obligation under the “Worry Free” Warranty is covered for two years from date of purchase. The “Worry Free” Warranty is limited to replacement of the defective or worn-out product with the same (or comparable) product in accordance with this warranty. Under no circumstances will the obligation or liability of aFe exceed the purchase price of the product as indicated on the original bill of sale. Warranties are non-transferable, contain no cash value and are only extended to the owner of the vehicle provided that the ownership has not changed since the installation of the product. This warranty does not apply to products which have been altered, modified, damaged from neglect, abuse or from an accident, misused, improperly installed, contaminated with dirt or other contaminants, or used in applications other than recommended in our printed or digital media. aFe does not provide reimbursements for delay, shipping fees, labor, mileage, or any other costs involved in installation or re-installation of the products in question.

Registration Process:

Simply register your DFS Fuel System product online at <http://www.aFepower.com/reg>

Claim Process:

To file a warranty claim, customers are required to submit their information using the warranty claim form online at <http://afepower.com/inquiries/tech-warranty.php>

All Warranty Claims require: 1) Online registration of the product. 2) If item has not been registered online, then a copy of your original purchase receipt is required. 3) An image of the warranted part. 4) An image showing the serial number on the warranty card or the barcode label on the box. You may be required to return the part for inspection and you may be required to purchase a new replacement part while the warranty claim is being processed. Once the warranty claim has been reviewed and approved, aFe will provide you with a refund of the replacement purchase price. aFe's obligation under the “Worry Free” Warranty is limited to replacement of the defective or worn-out product (excluding finish) with the same (or comparable) product in accordance with this warranty. In addition this warranty does not cover fuel filters, which need to be replaced when worn. Warranty is valid provided aFe instructions for installation were properly followed.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



advanced FLOW engineering, inc.
252 Granite Street Corona, CA 92879
TEL: 951.493.7100 • TECH: 951.493.7100 x23
E-Mail: Tech@aFepower.com